 **UNIVERSITY OF MAINE AT FARMINGTON**

**COLLEGE OF EDUCATION, HEALTH AND REHABILITATION**

**Lesson Plan Format**

**Teacher’s Name:**Ms. Libby **Lesson #: 1 Facet:** Self- Knowledge  
**Grade Level:**9th Grade **Numbers of Days:** 2-3 Days  
**Topic:** Linear Equations  
  
**PART I:**  
**Objectives**  
Students will understand that solutions to equations have an identity which is often developed by rewriting an expression in an equivalent form.  
Students will know inequalities, variables, linear equation, identity, slope-intercept.  
Students will be able to recognize that solutions to equations have an identity which is often developed by rewriting an expression in an equivalent form.  
**Product:**Blogger  
  
**Maine Learning Results (MLR) or Common Core State Standards (CCSS) Alignment**  
Math Common Core State Standards  
Content Area: Algebra  
Grade: High School  
Domain: Reasoning with Equations and Inequalities  
Cluster: Solve systems of equations  
Standard:  
#6 Solve systems of linear equations exactly and approximately, focusing on pairs of linear equations in two variables.  
#7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.  
  
**Rationale:**  
Students will meet standard six by creating equations using real world examples and solving them using graphic organizers to synthesis their data.   
  
**Assessments**  
**Pre-Assessment: (Lesson 1 only)**  
Students will work in groups to answer a pre-algebraic survey.  
  
**Formative (Assessment for Learning)**  
**Section I – checking for understanding during instruction**  
Let’s compare notes will help the students synthesis their date and notes with the teacher to make sure they have the appropriate data to be able to move on through the lesson. This will also help the teacher see how much information the students understand and to what extent.  
  
**Section II – timely feedback for products (self, peer, teacher)**  
Students will self-assess using a checklist making sure they have all the information in their blogger so that they will be able to look back on them and understand what lesson was taught that day. Teacher will make comments on each blog entry to make sure the students completed the checklist.  
  
**Summative (Assessment of Learning):**  
Blogger (100 points) Throughout the year, students will be keeping up with a daily blog on how they are progressing through each lesson. They will clearly list any problems they found while trying to complete an assignment. They will explain if they had any trouble understanding the lesson or concept and why. If students did not have any troubles that week, they will write about two new things they learned and why it is important for them to know that information. I will be constantly checking the blogs for ideas on how I can modify by lessons and It will give me a small picture on how my students feel they are doing in the class. I will make comments on the blogs as I see fit. There will be no points taken off for any grammatical errors although students should always spell check before hitting "publish" on the blog entry.  
  
**Integration**  
**Technology:**  
Students will be using Blogger daily as a digital journal. This will help the teacher and the student’s track their learning progress as the unit continues.  
**Content Areas:**  
**English:** Students will be constantly writing the English language using proper grammar and mechanical skills learned from previous language arts classes.  
**Art:** Students will be able to personalize their blogger accounts to what best fits their personalities and likes. They are able to change blog posting fonts, sizes, and layout.  
  
**Groupings**  
**Section I - Graphic Organizer & Cooperative Learning used during instruction**  
Students will use a problem solution chart to come up with possible problems and work out the solution to see how much they know. The teacher will have a three minute interview with each student at different times, asking multiple questions to see if the student has mastered and understood the lesson and to what extent.  
**Section II – Groups and Roles for Product**  
Students will individually use blogger to create a daily blog entailing any problems they had during the lesson and one new thing they learned. Students will then be required to read at least one other blog published by their fellow peers. They will compare and contrast what they read from another student’s blog and incorporate it into their next entry. Groups/partners will already be previously picked according to learning styles, personality, and academic standing with consideration to peer relationships.   
  
**Differentiated Instruction**  
**MI Strategies**  
**Verbal:** As the teacher goes around to each student to compare notes. The students will be able to talk through their thinking to the teacher and be able to easier grasp the concept.  
**Logic:** Students will be solving a simple system that requires them to think through each problem logically.  
**Visual:** The teacher will show many examples that are projected in front of the screen. Students will have a visual aid to help guide them while solving other simple systems.  
**Musical:** The teacher will come up with a song to help the students memorize solving techniques. For example, a song about PEMDAS.  
**Kinesthetic:** The teacher will create a problem on the white board and the students will each have to solve the problem on their own mini white boards provided by the school. When the students are done, they will hold up the white board to indicate to the teacher to check their answer.  
**Intrapersonal:** Students will work alone on a work sheet solving systems of linear equations in a given amount of time.  
**Interpersonal:** After the students work alone, they will come together as a group and compare answers. Students will change the answers accordingly.  
**Naturalist:** The teacher will bring in objects from outside that represent the four seasons. The teacher will put the objects on the projector with a graphing gird background. The teacher will trace the outline of the objects and have the students find the equation of the lines surrounding the object.  
  
**Modifications/Accommodations**  
***From IEP’s ( Individual Education Plan), 504’s, ELLIDEP (English Language Learning Instructional Delivery Education Plan)****I will review student’s IEP, 504 or ELLIDEP and make appropriate modifications and accommodations.*  
  
**Plan for accommodating absent students:**  
Students will have a Skype buddy that was assigned at the beginning of the year and they will Skype into class if a computer is available to them. Students that miss the lesson will have an absent folder with all the worksheets on linear equations that their fellow classmates have completed. I will provide the student with a website tutorial on linear equations to help them still learn how to create and solve equations while away. The student will visit with me during my office hours and after school to complete the worksheets together. If the student does not finish the worksheets after school or with the teacher then they have two days to complete the worksheets and turn them in for full credit. The student will still create a blog entry and explain the troubles that they had while completing the worksheets.  
  
**Extensions**  
**Type II technology:**  
Students will be using Blogger daily as a digital journal. This will help the teacher and the student’s track their learning progress as the unit continues. Blogger is a Type II technology because the students will be able to go back and visit previous blog entries and make corrections at any time. Their entries will be available for others to view and to brainstorm off of each other and has the option for other to comment on each entry.   
  
**Gifted Students:**  
Gifted students will still create a daily blog entry but instead of commenting and responding to a fellow student’s blog, they have to find a different math blog to follow and comment on. This blog must relevant to linear equations and mathematics. I will give the students examples of blogs that they can follow such as Dan Mayer or other mathematicians. The students must pick something from the blog they found interesting and something they want to learn more about and incorporate that into their daily entry.  
  
**Materials, Resources and Technology**  
Graphic Organizer (Problem Solution Chart)  
Laptops  
Mini white boards  
White board markers   
Checklist   
Blogger accounts   
Graphing paper  
Calculators  
  
**Source for Lesson Plan and Research**  
**Graphic Organizer (Problem Solution Chart):**  
<http://www.eduplace.com/graphicorganizer/pdf/probsol.pdf> This provides the students with the graphic organizer they need to help synthesize their data and thinking  
**Blogger:**  
<http://www.blogger.com/> This is where the students will set up their blogger account and keep their daily blog.  
**Math Vocabulary/ Definitions:**  
<http://www.crctlessons.com/math-vocabulary.html> This is where all the mathematical definitions the students will need are located for easy access.  
**Checking For Understanding (Let’s Compare Notes):**  
[http://edu221spring11class.wikispaces.com/file/view/strategies.pdf](http://edu221spring11class.wikispaces.com/file/view/strategies.pdf/200849872/strategies.pdf) This is where all CFU are located and explains the specific CFU for this lesson is listed.  
**Cooperative Learning (Three Minute Interview):**  
<http://w4.nkcsd.k12.mo.us/~kcofer/social_cooperative_structures.htm> This provides many strategies on Cooperative learning and where the specific CL for this lesson is listed.  
**Math at the Mall (Hook):**  
<http://www.mathplayground.com/mathatthemall1.html> This is the game the students will play at the beginning of the lesson to give them an idea of what they will be expected to learn and understand.  
  
  
  
**PART II:**  
**Teaching and Learning Sequence (Describe the teaching and learning process using all of the information from part I of the lesson plan)**  
  
*Classroom arrangement:* Desks will be in groups of threes all facing each other so students will be able to easily converse during group work.  
  
**Agenda:**  
Day one (80 minutes):

* Getting to know the students (40 minutes):
  + Attendance & overview of Syllabus (10 minutes)
  + Group assignments (5 minutes)
  + Pre-assessment (15 – 25 minutes)
* Hook (5 minutes)
* Begin class discussion on linear equations and inequalities. (25 minutes)
  + Definitions of inequalities, variables, linear equation, identity, and slope- intercept form. (20 minutes)
  + Students will record vocab and definitions on problem solution chart. (5 minutes if needed)
* Explain blogger expectations and set up Blogger accounts. Students will be given blogger checklist and student guide on blogger (5- 10 minutes)

Task: Explore blogger using student guide and write first blog posting on how they feel blogger could be useful for them. All homework is due by next class.  
  
Day Two (80 minutes):

* Attendance and blogger homework. Students can ask questions or comment on any troubles they had setting up blogger. Q&A (10 minutes)
* Continue discussion of linear equations and inequalities (solving for ‘x’ with order of operations and graphing) Students will record example problems on graphic organizer (30 minutes)
* Students will work individually to solve three problems on the overhead. As students are working I will go around and check student’s graphic organizer and compare notes to make sure students have correct information. (20 minutes)
* Students will then get into their groups and collaborate on the problems and compare answers. Answers to the problems will be written on white board. Q&A. (20 minutes)

Task: Complete graphic organizer for next class.  
  
Day Three (80 minutes):

* Attendance and Q&A on graphic organizer (5 – 10 minutes)
* Example problems of solving for 'x’ using PEMDAS (10 – 15 minutes)
* Overview discussion on how to find equations of lines. (30 minutes)
  + Students work individually to find the equation of the lines surrounding the shape. (15 - 20 minutes)
  + Class discussion on answers and Q&A (10 minutes)
* Students will be given individual white boards and markers. Students must answer and show work for example problems given to the class. I will come around and have a three minute interview with students as the finish the problems. (25 minutes)

Task: Blog entry on week’s lesson using checklist previously given.  
  
Students will understand that solutions to equations have an identity which is often developed by rewriting an expression in an equivalent form. If students want to ever invent or create a product, they will have to be able to come up with an equation to be able to figure out how much profit they will make overall. *Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.*Students will be working in assigned groups to answer a pre-algebraic survey. Students will start the lesson by playing a computer game called "Math at the Mall" This will get them thinking about profit and percentages to get them thinking in the right mind set for the lesson.   
**Where, Why , What, Hook, Tailors:** *Logical, Visual, Musical, Interpersonal.*   
  
Students will know PEMDAS, variable, inequalities, linear equation, slope-intercept, identity. **(See content Notes for definitions)** I will write examples of each definition on the white board and have students come up with their own written definition that will help them better understand it. I will have multiple examples for each vocabulary word and have students solve them by verbally explaining to me the steps on how to find the solution. Students will use a problem solution chart to come up with possible problems and work out the solution to see how much they know. I will be going over the definitions of the vocabulary they will need throughout this lesson. Students will be recording the definitions on their problem solution chart and will fill out an exit slip that asks them to provide examples of each vocabulary word. This will allow me to see what I must readdress the next class. As the students are working individually on example problems, I will be walking around checking the student’s notes. Let’s compare notes will help the students synthesis their date and notes with the teacher to make sure they have the appropriate data to be able to move on through the lesson. Students will be collaborating in their groups to compare notes as well. This will also help the teacher see how much information the students are understanding and to what extent.   
**Equip, Explore, Rethink, Tailors:** *Logical, Interpersonal, Intrapersonal.*   
  
Students will be able to recognize that solutions to equations have an identity which is often developed by rewriting an expression in an equivalent form. Students will use a problem solution chart to come up with possible problems and work out the solution to see how much they know. I will assign groups before the unit starts and will change the groups if I see fit according to any student grouping problems. I will be bringing in outside objects and trace the objects on to a coordinate plane. The students must find the equations of the lines that surround the object using mini white boards. I will have a three minute interview with each student as they finish the task, asking multiple questions to see if the student has mastered and understood the lesson and to what extent. Throughout the unit, students will be keeping up with a daily blog on how they are progressing through each lesson. For each lesson there will be a different prompt question the students will need to answer for every other blog entry. The prompt for this lesson is to have students create examples that define any two of the vocabulary we previously went over in class **(See content notes for definitions on vocabulary)** and they must solve the examples and check their answers. They cannot choose the same two vocabulary words and by the end of the lesson, they will have used all the vocabulary words. The other entries will follow along with the checklist. They will clearly list any problems they found while trying to complete an assignment. They will explain if they had any trouble understanding the lesson or concept and why. If students did not have any troubles that week, they will write about two new things they learned and why it is important for them to know that information. I will be constantly checking the blogs for ideas on how I can modify by lessons and It will give me a small picture on how my students feel they are doing in the class. I will make comments on the blogs as I see fit. There will be no points taken off for any grammatical errors although students should always spell check before hitting "publish" on the blog entry. I will use a checklist when checking the blogs to make sure the students included the appropriate information.   
**Explore, Experience, Revise, Refine, Tailors:** *Verbal, Logical, Interpersonal, Intrapersonal, Kinesthetic, Naturalist,*   
  
Students will self-assess using a checklist making sure they have all the information in their blogger so that they will be able to look back on them and understand what lesson was taught that day. At the end of each week, the students will read a peers blog and comment on one of the entries that they related too and must explain why they chose that entry and how it relates to them. Gifted students will find a math blog from someone else and make an entry on what they read in that blog. I will make comments on each blog entry to make sure the students completed the checklist. Every other blog entry must follow the prompt that states that they must pick two vocabulary words **(See content notes for definitions)** for every other entry and create examples for each vocab definition and solve it.   
**Evaluate, Tailors:** *Logical, Intrapersonal.*

**Content Notes**  
Students will know…..   
*Vocabulary Definitions:*

* PEMDAS
* Variable
* Inequalities
* Linear Equation
* Slope- Intercept form
* Identity

*PEMDAS (Order of Operations)*  
Order of operations is very important when solving problems that have more than just multiplication or addition. Students will often get confused on how to solve a problem if there are many operations in just one problem. PEMDAS is an easy to way remember how to solve problems that look like 2 x 5 + (14 + 7) - 62 ÷ 3  
**P**arentheses:  
When solving the problem above, students must first start with what is inside the parenthesis (14 + 7). So this problem now becomes:  
2 x 5 + (21) - 62 ÷ 3   
OR   
2 x 5 + 21 – 62 ÷ 3  
**E**xponents:  
The next step in solving this problem is to get rid of/simplify the exponents (62) Once you have done that, the problem will look like:  
2 x 5 + 21 – 36 ÷ 3  
**M**ultiplication (left to right)  
Multiplication is now ready to be used in solving this problem. One thing to remember is that you must always solve multiplication going from left to right. This will come in handy if there are more than just two numbers being multiplied in a problem. An example of that would look like 3 x 5 + 7 x 8 to solve that particular problem you will first multiple 3 x 5 and then multiple 7 x 8 and add both answers. So it would be 15 + 56 = 71  
For the problem above we only have one multiplication part which makes it easy to solve. You simply multiple 2 x 5 which will make the problem look like:  
10 + 21 – 36 ÷ 3  
**D**ivision (left to right)  
Division is just like multiplication when solving a problem. If there is more than one division part to a problem then you must start from the left and work your way to the right. An example of this is: 49 ÷ 7 – 114 ÷12 If you start from left and work your way right then the problem will look like 7 – 144 ÷ 12 If you keep working your way right the problem will then look like:  
7 – 12 = - 5  
For the problem above there is only one division that takes place 36 ÷ 3 Once you solve for that part the problem will look like:  
10 + 21 - 12  
**A**ddition (left to right)  
Addition is just like multiplication and division where you have to start from the left and work your way right. This problem however, only has one addition part 10 + 21 which makes solving very simple. Once you add those two numbers the problem is almost ready to be completed!  
10 + 21 – 12  31 - 12  
**S**ubtraction (left to right)  
Subtraction is exactly the same as addition in the way that you must work left to right in order to solve the problem correctly. Lucky for us, all there is left is subtraction so we can find the final answer of the problem 2 x 5 + (14 + 7) - 62 ÷ 3  
31 – 12 = 19  
That makes the solution to the problem  
2 x 5 + (14 + 7) - 62 ÷ 3 = **19**  
  
*Variable:*  
A variable is a letter representing one or more numbers. An example of this is 2x – 5 = 1 where ‘x’ is the variable in this equation. The variable ‘x’ is a number that we do not know yet and we must solve the equation in terms of ‘x’ to find out. To solve for ‘x’ you have to it away from the rest of the numbers by moving 5 to the other side of the equal sign. You have to do the opposite of what the number is. So since the equation says that 2x is *subtracting* 5, you have to *add* 5 to the other side. The equation than becomes:  
2x = 5 + 1  
OR  
2x = 6  
The next and final step is to get the number that is attached to ‘x’ away. We have to remember to do the opposite of whatever that number is already doing. So 2 is being *multiplied* by ‘x’ which means you have to *divide* 2 to the other side of the equal sign. That will give us the answer of **x = 3**  
  
Inequality:  
An inequality is a mathematical sentence that compares two quantities that do not equal each other. There are a two main ways to compare quantities:  
> (Greater than)  
< (Less than)  
An example of this is 2 + 3 < 97 – 82 This is saying that 2 + 3 is less than 97 - 82  
To check that this is true, you solve both sides separately which will make this 5 < 15 which saying that 5 is less than 15 which is correct.  
  
Linear Equation:  
A linear equation is an equation whose graph is a straight line in the coordinate plane. The equation can be written like y = 2x -3 This was written using the slope-intercept formula which is defined below.  
  
Slope – Intercept Form:  
The slope - intercept form of a linear equation is given by the following formula: y= mx + b ;(where ‘m’ is the slope and ‘b’ is the y – intercept)  
Slope is a ratio use to measure the steepness of a line. To find slope you must find the change in ‘y’ over the change in ‘x’. This can also be written as: Rise/Run  
The way to find rise/run is to have to points on a line. For example (1,2) and (3,4); to find the ‘rise’ you find the difference between the y coordinates. So; 4 – 2 = 2 then you do the same thing for the x coordinates to find the ‘run’. So; 3 -1 = 2 this will make the final answer be 2/2 which is 1 so the slope is 1.  
  
Identity:  
An equation which is true for every value of the variable is called an identity equation. Examples of an identity equation are; 5(*a* – 3) = 5*a* – 15 and (*a* + *b*) 2 = *a*2 + 2*ab* + *b*2  
An inequality which is true for every value of the variable is called an identity inequality. For example, the inequality *a*2 ≥ 0 is true for every value of *a*.  
  
**Handouts**  
Written tutorial to set up a blog account and blog posting  
Checklist for blog entries  
Problem solution chart  
Graphing paper  
  
Maine Common Core Teaching Standards for Initial Teacher Certification and Rationale  
*Standard 1 – Learner Development. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.*  
  
***Learning Styles***  
***Clipboard:***The expectations for the class are clearly posted inside the classroom and on the class website. It covers everything that is expected and nothing is left to interpretation unless otherwise discussed with me. Students will be given rubrics on how they will be scored so they know project expectations at all times. Students will be given "how to..." sheets to help with any projects and links to YouTube tutorials for further help outside the classroom.   
***Microscope:*** There will be graphic organizers for every part of the unit so students will be able to write down their learning process. There will be checking for understanding throughout the lessons so students will always know if they are retaining the correct information or not. Class collaboration will allow the students to work together and constantly think deeper into the subject.   
***Puppy:*** Students will be seated in groups of threes so there will always be peer support for each student. I will constantly be walking around the classroom ready to help one-on-one with students that have any questions or confusion on certain tasks. Online tutorials will help students as an extra support when they are at home and need guidance. Classroom expectations will be posted inside the classroom to create a helping and respectful environment for everyone.   
***Beach Ball:*** Students will have the ability to personalize their blogs to fit their particular style. Students will be creating their own linear equation examples and have to solve them. They have the option on whose blog entry they will follow and comment on whether it be a fellow peer or a mathematician.   
***Rationale:*** This lesson meets the standard because I know different strategies to appeal to all kind of learning styles. Students will have multiple opportunities to prove their understanding to further their knowledge in the unit. This lesson requires students to think critically in order to solve the equations but they will have the freedom to choose what equations to solve and the liberty to come up with their own equations.   
*Standard 6 -* *Assessment. The teacher understands and uses multiple methods of assessment to engage learners in their on growth, to monitor learner progress, and to guide the teacher's and learner's decision making.*  
  
*Formative:*  
**Section I – checking for understanding during instruction**  
Let’s compare notes will help the students synthesis their date and notes with the teacher to make sure they have the appropriate data to be able to move on through the lesson. This will also help the teacher see how much information the students are understanding and to what extent.  
  
**Section II – timely feedback for products (self, peer, teacher)**  
Students will self-assess using a checklist making sure they have all the information in their blogger so that they will be able to look back on them and understand what lesson was taught that day. Teacher will make comments on each blog entry to make sure the students completed the checklist.  
  
*Summative:*  
Blogger (100 points) Throughout the year, students will be keeping up with a daily blog on how they are progressing through each lesson. They will clearly list any problems they found while trying to complete an assignment. They will explain if they had any trouble understanding the lesson or concept and why. If students did not have any troubles that week, they will write about two new things they learned and why it is important for them to know that information. I will be constantly checking the blogs for ideas on how I can modify by lessons and It will give me a small picture on how my students feel they are doing in the class. I will make comments on the blogs as I see fit. There will be no points taken off for any grammatical errors although students should always spell check before hitting "publish" on the blog entry.  
  
*Rationale:*  
This will let me know where the students are in terms of mastery and understanding of the content being taught. I will use this information in planning future lessons and to strengthen my teaching style and technique so that all students benefit from my lessons. Formative assessments will be used multiple times in my lessons so that I will constantly have an idea of where my students are in their learning.   
  
*Standard 7* - *Planning Instruction. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.*

*Content Knowledge:*  
Students will know linear equations, inequalities, slope-intercept form, identity, variables, and order of operations.   
  
*MLR or CCSS:*  
Math Common Core State Standards  
Content Area: Algebra  
Grade: High School  
Domain: Reasoning with Equations and Inequalities  
Cluster: Solve systems of equations  
Standard:  
#6 Solve systems of linear equations exactly and approximately, focusing on pairs of linear equations in two variables.  
#7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.  
*Facet:*  
Self- Knowledge  
  
*Rationale:*  
Students will meet standard six by creating equations using real world examples and solving them using graphic organizers to synthesis their data.  
  
*Standard 8 -* *Instructional Strategies. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.*  
  
*MI Strategies:*  
**Verbal:** As the teacher goes around to each student to compare notes. The students will be able to talk through their thinking to the teacher and be able to easier grasp the concept.  
**Logic:** Students will be solving a simple system that requires them to think through each problem logically.  
**Visual:** The teacher will show many examples that are projected in front of the screen. Students will have a visual aid to help guide them while solving other simple systems.  
**Musical:** The teacher will come up with a song to help the students memorize solving techniques. For example, a song about PEMDAS.  
**Kinesthetic:** The teacher will create a problem on the white board and the students will each have to solve the problem on their own mini white boards provided by the school. When the students are done, they will hold up the white board to indicate to the teacher to check their answer.  
**Intrapersonal:** Students will work alone on a work sheet solving systems of linear equations in a given amount of time.  
**Interpersonal:** After the students work alone, they will come together as a group and compare answers. Students will change the answers accordingly.  
**Naturalist:** The teacher will bring in objects from outside that represent the four seasons. The teacher will put the objects on the projector with a graphing gird background. The teacher will trace the outline of the objects and have the students find the equation of the lines surrounding the object.  
  
*Type II Technology:*  
Students will be creating a blogger account and keep a daily blog about the lesson. Every other day they must follow a prompt that says they have to choose two vocabulary words **(see content notes)** and write examples of equations that represent each one. Than they must solve their own examples and check to see if it is right. On the other days they must answer a checklist saying what they found difficult in the lesson, what they learned, and they must comment on another peer’s blog entry. Students will be able to look back on previous blog entries to see how they have progressed. I will be able to look back on each student’s entry to see what they need extra help on and see where they are in understanding the unit. This blog will be throughout the whole lesson. By commenting on the student’s blogs, this becomes a type II technology since they can each see their peer’s blogs online and make comments.

*Rationale:*  
This lesson incorporates all eight multiple intelligences to ensure that each student is getting the most out of my unit. This helps so that the students all have an equal opportunity to learn the way they learn best. It ensures that every student is included and engaged in the lesson being taught. I want all students to understand their learning style better so that later on in other classes, they can take this knowledge with them to further their learning.  
  
*NETS STANDARDS FOR TEACHERS*  
1. Facilitates and Inspire Student Learning and Creativity. Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.  
**a. Promote, support, and model creative and innovative thinking and inventiveness**  
  
**b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources**  
  
**c. Promote student reflection using collaborative tools to reveal and clarify students’ conceptual understanding and thinking, planning, and creative processes**  
  
**d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments**  
  
*Rationale:*  
Students will have to think critically to fill out their problem solution chart. I will be walking around and checking their chart to make sure that they have the correct information on it and what information they could add to help them further understand the content. Students will have to think creatively to come up with their own examples of linear equations so they can solve them and show their deeper understanding of the unit. Students will be exposed to creative uses of technology and how the math applies to the real world. "Math at the Mall" will show them how to use this knowledge in simple everyday uses such as shopping and buying food.  
  
2. Design and Develop Digital Age Learning Experiences and Assessments. Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop knowledge, skills, and attitudes identified in the NETS-S.  
**a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity**  
  
**b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress**  
  
**c. Customize and personalize learning activities to address students’ diverse learning styles, working strategies, and abilities using digital tools and resources**  
  
**d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching**  
  
*Rationale:*  
Students will be using Blogger.com constantly throughout the lesson to help them understand where they truly are in mastering the subject content being taught. This type II technology allows them to explore other blogs from their fellow peer and the opportunity to follow blogs from mathematicians to further their knowledge outside the unit as well. Through formative and summative assessments, students will have multiple opportunities to prove whether the understand the content, to what extent, and what they need help on understanding. Students will each have the opportunity to learn according to their learning style and their multiple intelligences.